



International Baccalaureate®
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Primary Years Programme

Developing a transdisciplinary programme of inquiry





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IB mission statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

IB learners strive to be:

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
Reflective	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

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Guidelines for developing a school's programme of inquiry

Introduction

This document aims to give guidance to schools developing a new transdisciplinary **programme of inquiry**, or revising an existing one.

The curriculum in a Primary Years Programme (PYP) school includes all student activities, academic and non-academic, for which the school takes responsibility. The curriculum is expressed as three interrelated components: the written, the taught and the assessed curriculums. All have an impact on student learning. At the heart of the curriculum is the learner constructing meaning.

Each school is required to document its written curriculum as specified in the IB *Programme standards and practices* (2005).

A comprehensive, coherent, written curriculum based on the requirements of the programme and developed by the school is available to all sections of the school community.

Programme standards and practices: Standard C1 (IB 2005)

The written curriculum identifies what is worth knowing for students. When developing the written curriculum in their schools, teachers and administrators need to consider the **transdisciplinary themes** and the subject-specific knowledge, concepts and skills.

The knowledge component of the written curriculum is determined by the belief that there are areas of knowledge that, while important for any student, are especially significant in schools that aim to promote international-mindedness on the part of their students.

The work of Ernest Boyer (Boyer 1995) has been seminal to the development of the PYP. Boyer proposed that students explore a set of themes that represents shared human experiences. He referred to these as “core commonalities”. Debate and discussion, representing multiple perspectives, about this idea of human commonalities have led to the selection of six transdisciplinary themes (see figure 1) that are considered essential in the context of a programme of international education. These themes:

- have global significance—for all students in all cultures
- offer students the opportunity to explore the commonalities of human experience
- are supported by knowledge, concepts and skills from the traditional subject areas but utilize them in ways that transcend the confines of these subjects, thereby contributing to a transdisciplinary model of teaching and learning
- will be revisited throughout the students’ years of schooling, so that the end result is immersion in broad-ranging, in-depth, articulated curriculum content
- contribute to the common ground that unifies the curriculums in all PYP schools.

PYP transdisciplinary themes	
Who we are	An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities, and cultures; rights and responsibilities; what it means to be human.
Where we are in place and time	An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.
How we express ourselves	An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.
How the world works	An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.
How we organize ourselves	An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.
Sharing the planet	An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.

Figure 1

The PYP practice under standard C1 requires that:

There is a coherent, articulated programme of inquiry.
Programme standards and practices: Practice C1.16 (IB 2005)

Students inquire into, and learn about, globally significant issues in the context of **units of inquiry**, each of which addresses a **central idea** relevant to a particular transdisciplinary theme. **Lines of inquiry** are identified in order to explore the scope of the central idea for each unit. These units collectively constitute the school's programme of inquiry. One sample of a transdisciplinary programme of inquiry is included in this publication.

What does a programme of inquiry include?

The PYP practices under standard C1 require that:

The curriculum includes the required number of units per year.
Programme standards and practices: Practice C1.21 (IB 2005)

The programme of inquiry allows for the balanced inclusion of subject areas.
Programme standards and practices: Practice C1.18 (IB 2005)

Schools should be mindful of the fact that the transdisciplinary programme of inquiry is not merely a novel way of repackaging subject-specific content. Rather, it is a way of students using a range of subject-specific knowledge, concepts and skills in order to develop a deeper understanding of the transdisciplinary themes.

Transdisciplinary themes

The programme of inquiry is a matrix made up of the six transdisciplinary themes running vertically, and the age groups running horizontally. Organizing the curriculum around the six transdisciplinary themes contextualizes the learning for the students. It enables them to experience a balance of subject-specific knowledge, concepts and skills in order to develop an understanding of the transdisciplinary themes (see figure 1).

Each transdisciplinary theme is accompanied by an extended description that explains what students will be inquiring into under this theme. This description should be referred to continually to ensure the relevance of the central ideas beneath it. It should be used as a tool to ensure the balance of the units of inquiry under each theme, rather than as a checklist.

Units of inquiry

In each of the cells of the matrix, a unit of inquiry is documented that is age appropriate. Each unit of inquiry on the programme of inquiry should consist of a central idea, transdisciplinary concepts (key and/or related concepts) and lines of inquiry, as described in figure 2.

Example of a unit on a programme of inquiry
<p>Age: 10–11</p> <p>An inquiry into:</p> <p>How we express ourselves</p> <p><i>An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.</i></p> <p>Central idea</p> <p>Rituals, traditions and artifacts provide a window into the beliefs and values of cultures.</p> <p>Key concepts:</p> <ul style="list-style-type: none"> • Function • Perspective • Reflection <p>Related concepts:</p> <ul style="list-style-type: none"> • Beliefs • Diversity <p>Lines of inquiry</p> <ul style="list-style-type: none"> • What constitutes a culture • Significance of rituals and traditions • How artifacts symbolize beliefs and values

Figure 2

Central idea

Each of the units of inquiry has a central idea. The central idea should be written in one sentence that expresses concisely an enduring understanding. Each central idea will support students' understanding of the particular transdisciplinary theme it is connected to, and should challenge and extend students' prior knowledge.

Clear links between the transdisciplinary theme, the central idea and the associated lines of inquiry need to be established and articulated. The summative assessment tasks (documented in the PYP planner that accompanies the unit of inquiry) should also be articulated with the central idea: if there is no effective way in which students can demonstrate their understanding of the central idea, the central idea will need to be revised until such assessment is possible.

Development of central ideas requires time, careful thought and collaboration with staff. At times, students will also be involved. The central idea should be engaging, relevant, challenging and significant, and written as a concise statement. The central idea should be compelling to learners of all abilities. Learners of various abilities and ages can study a well-formulated central idea to differing depths.

Central ideas do not have to be worded in a complex way, nor do they have to be written in language appropriate to the age of the students. Words that students may not have come across before, but are essential to the understanding of the central idea, should be included. This means that the central idea may need to be “unpacked” by the teachers or students and discussed in language that the students can understand. By the end of a unit of inquiry, it is reasonable to expect students to be articulate about the central idea and to demonstrate their understanding in their own words.

At the planning stage, it may hinder the development of the unit of inquiry to spend time trying to come up with a “catchy” title in addition to the central idea. For this reason, the PYP sample programme of inquiry does not contain titles. However, in the context of a school it may be convenient for teachers or students to add titles at a later stage in order to facilitate discussion about the units of inquiry.

Concepts

A school's programme of inquiry should demonstrate the opportunity for deeper exploration of all eight PYP key concepts.

The central idea should be designed to promote conceptual development. The concepts are identified early in the process and embedded into the central idea to help the students to develop their conceptual understanding and to extend their critical thinking capacity. Listing the concepts (key concepts and related concepts) on the programme of inquiry will help to focus the direction of the units. No more than three of the key concepts should be selected to focus on in a unit of inquiry.

Related concepts derived from the key concepts and from the subject areas can also be listed. They deepen an understanding of the subject areas while providing further opportunities to make connections throughout the learning, from one subject to another, and between disciplinary and transdisciplinary learning.

Lines of inquiry

Each unit will contain three or four lines of inquiry. The lines of inquiry clarify the central idea and define the scope of the inquiry. These contributing aspects of the central idea extend the inquiry, focus student research, and deepen students' understanding. Connections should be made, as appropriate, between the lines of inquiry as well as with the central idea.

Number of units of inquiry in the matrix

There could be as many as 54 units in a programme of inquiry if schools have students aged from 3 to 12 years old. However, as students aged 3–5 years only have to complete a minimum of four units and students in their final year will replace one unit of inquiry with the exhibition, schools will generally have fewer units in the matrix.

Developing a programme of inquiry for the first time

The PYP practice under standard C1 requires that:

The programme of inquiry and corresponding unit planners are the product of sustained collaborative work involving all the appropriate staff.

Programme standards and practices: Practice C1.17 (IB 2005)

The task of developing a programme of inquiry is one the whole staff, including classroom teachers and single-subject teachers, takes responsibility for. It represents a sustained collaborative process involving all the appropriate PYP staff, full-time or part-time, to the fullest possible extent.

It is the role and responsibility of the PYP coordinator to facilitate the process in a manner that he or she believes will work best for the staff. This may involve a series of small-group meetings and/or whole-staff meetings. Examples of how the process could work include the following.

- A core group of teachers develops a skeleton programme of inquiry that is then shared and fully developed with the rest of the staff.
- Groups of teachers develop units, either by age range or under each of the transdisciplinary themes. The whole staff then reviews the programme of inquiry to consider areas of redundancy or omissions.
- A national, regional or state curriculum may require that certain content be included in a school's programme of inquiry. The staff works to consider how this predetermined content might help to promote an understanding of the transdisciplinary themes.
- The whole staff works together all the way through the process to develop the complete programme of inquiry.

Schools should be aware that whatever method is selected for the development of a programme of inquiry, the process is a lengthy one, requiring many hours of collaboration and discussion. After a programme of inquiry has been developed, there will be many further refinements.

All PYP teaching staff, whether full-time or part-time, classroom teacher or single-subject teacher, then have the responsibility to develop accompanying planners that correspond to the units on the programme of inquiry.

When a school begins the process of developing a programme of inquiry, it should use any current curriculum documents already in the school and the IB sample programme of inquiry as a starting point. Any national, local or regional requirements will guide the units of inquiry that a school chooses to develop and include in its programme of inquiry.

Providing high-quality resources for a new programme of inquiry may be expensive and time consuming. The resources available in a school (artifacts, audio-visual materials, books, people, places and technology) should all be carefully considered when a school develops a programme of inquiry in order to make the best use of the resources it already has. Additionally, consideration should be given to the resources available in the local community in order to provide a meaningful context for inquiry.

It is sometimes necessary to translate the programme of inquiry for those in the school community who need to understand the central ideas in a different language. This must be undertaken very carefully so that the concepts embedded in each central idea are not lost in the translation. For dual language schools that have to communicate the programme of inquiry to the school community in two languages, it is of particular importance to ensure consistency of conceptual understanding across both languages of instruction.

Connections with the subject-specific scope and sequences

The PYP practice under standard C1 requires that:

There is a systematic approach to integrating the subject-specific scope and sequences with the programme of inquiry, where such integration clearly enhances student learning.

Programme standards and practices: Practice C1.24 (IB 2005)

The school's programme of inquiry and subject-specific scope and sequence documents are important components of the written curriculum.

The importance of the traditional subject areas is acknowledged. Indeed, the subject areas of language, mathematics, science, social studies, arts, and personal, social and physical education (PSPE) are specified as components of the PYP curriculum model. However, it is also recognized that educating students in a set of isolated subject areas, while necessary, is not sufficient. Of equal importance is the need to acquire skills in context, and to explore content that is relevant to students and that transcends the boundaries of the traditional subjects.

To be truly educated, a student must also make connections across the disciplines, discover ways to integrate the separate subjects, and ultimately relate what they learn to life.

(Boyer 1995)

When planning a programme of inquiry, schools should be aware that all significant science and social studies teaching should take place within the programme of inquiry. PSE is pervasive across the curriculum and is the responsibility of all teachers. It therefore needs to be considered in all areas of the curriculum and not just in the transdisciplinary programme of inquiry.

Moreover, knowledge, concepts and skills from any of the other subject areas (language, mathematics, PE and arts) should be included in the programme of inquiry whenever there is an authentic connection to the students' learning and understanding of the transdisciplinary theme.

The scope and sequence documents represent the planned learning within the subject areas. They inform the order of the units of inquiry and the teaching of any further knowledge, concepts and skills within each grade or year level. Depending on the circumstances of the individual school, these scope and sequence documents may be developed entirely by the school, they may be required content as specified by national, state or regional governing agencies or they may represent a combination of these things.

There should be a process of mapping the scope and sequence documents (whether they are mandated by the state, region or nation or developed by the school) with the programme of inquiry. This cross-referencing should continue between the documents throughout the ongoing development of the programme of inquiry. The scope and sequence documents should also be cross-referenced with each other as well as with the programme of inquiry.

The subject-specific strand descriptors in the annex of *Making the PYP happen: A curriculum framework for international primary education* (2007) and the PYP subject-specific scope and sequence documents may be used as a tool to ensure that the balance of subject-specific knowledge and skills is purposefully acknowledged.

Refining a programme of inquiry

The PYP practice under standard C1 requires that:

There is a carefully considered balance between disciplinary and transdisciplinary planning and teaching.

Programme standards and practices: Practice C1.25 (IB 2005)

The development of the school's programme of inquiry and the accompanying scope and sequence documents will differ in each setting due to the nature of the school and any locally or regionally determined subject requirements. The transdisciplinary themes provide the basis for much discussion and interpretation within a school, and allow for both local and global perspectives to be explored in the units. Consequently, it would be inappropriate for the PYP to attempt to produce a definitive programme of inquiry to be used by all schools. However, a sample programme of inquiry is included in this publication for schools to use and adapt as they wish.

The PYP philosophy and practices have more of an impact on a school's culture when the individuals in the school work collaboratively to develop a transdisciplinary programme of inquiry designed to meet the school's needs and predetermined requirements. Schools should explore the possibilities for links between the units taught at each year level, and also across the different age ranges, so that the programme of inquiry is articulated both vertically and horizontally.

The units of inquiry that are chosen and developed should illuminate the transdisciplinary theme under which they are placed. A central idea may quite reasonably be suitable for more than one transdisciplinary theme. The lines of inquiry will help to identify and clarify the direction the unit will take and, consequently, make the choice of transdisciplinary theme clearer. The concepts that drive the inquiry will also match the appropriate transdisciplinary theme for each grade or year level.

When schools have completed their first draft of a programme of inquiry, they should spend some time evaluating how successful it will be. They should check for breadth and balance both vertically (down each transdisciplinary theme) and horizontally (across the year or grade level). This will ensure that a balance of subject-specific knowledge, concepts and skills has been included in the programme of inquiry, allowing the learner to build conceptual understanding and explore the essence of the transdisciplinary theme (see figure 3).

Teaching using the programme of inquiry

The PYP practice under standard C1 requires that:

Adequate time is allocated for each unit of inquiry to allow for extensive in-depth inquiry, according to the requirements of the programme.

Programme standards and practices: Practice C1.20 (IB 2005)

All teachers, including single-subject teachers whenever appropriate, have a responsibility for developing planners to accompany the units of inquiry documented on the programme of inquiry. A selection of sample planners is included in this publication for schools to use and adapt as they wish.

The central ideas outline the concepts and knowledge that will be documented on the planners. It is then the responsibility of the teachers in the school to outline the learning experiences and assessments they feel will allow students to come to an understanding of the central idea. Summative assessment tasks and the evidence of achievement that students will need to produce also need to be documented on the accompanying planners. Schools should bear this in mind when developing central ideas.

Teachers of 3–5 year olds (early childhood) must plan and teach a minimum of **four** units of inquiry, which include a unit under the transdisciplinary theme “Who we are”, and another under the theme “How we express ourselves”. These two themes, in particular, are considered fundamentally relevant to all young students.

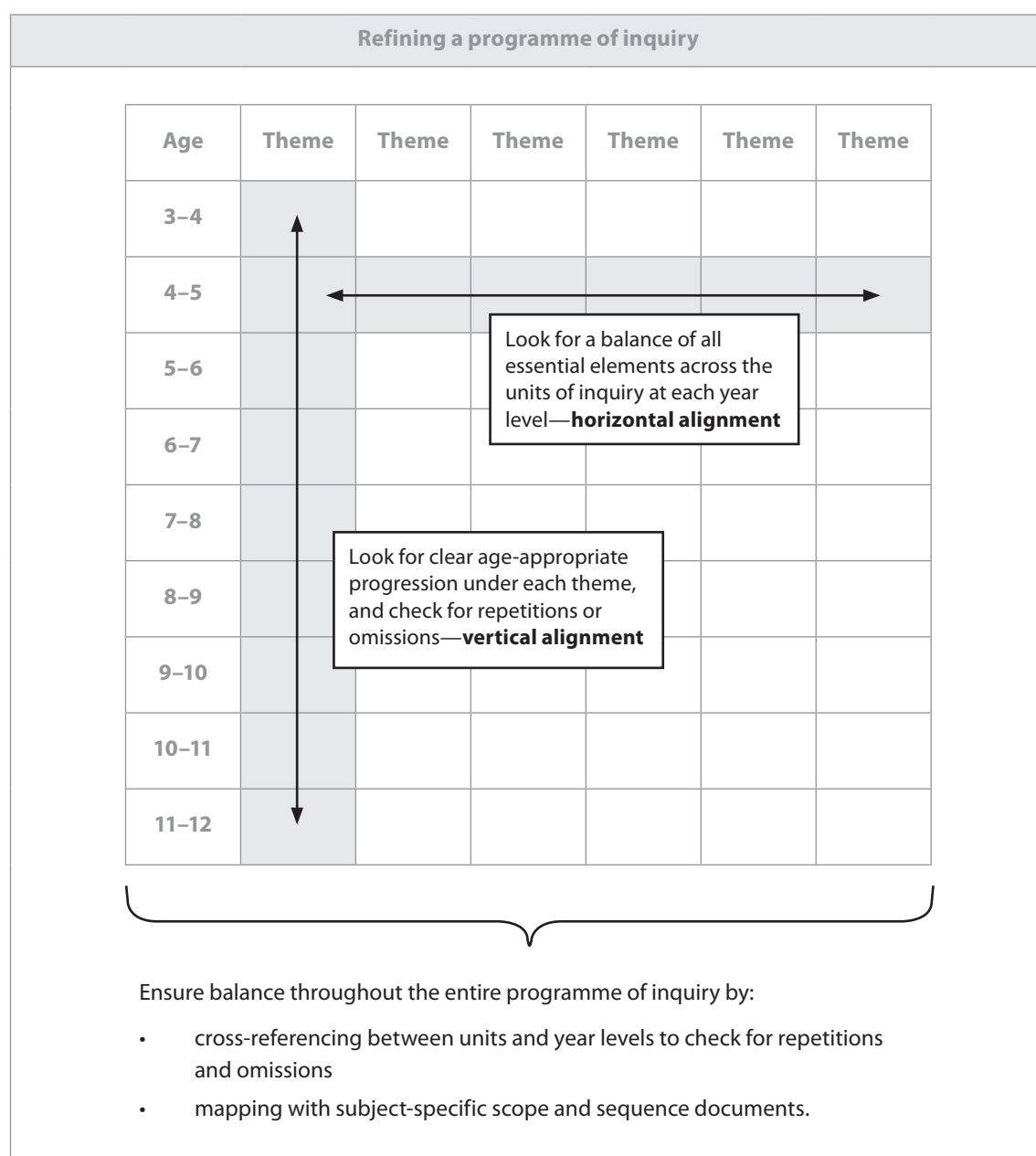


Figure 3

In the early childhood years, a substantial degree of flexibility is offered in terms of the length of the required four units of inquiry. Due to the nature of development and learning during early childhood (3–5 years), it is acknowledged that some units may be year-long and, consequently, more than one unit may be addressed at the same time. The same degree of flexibility regarding the length of the units for 3–5 year olds is considered appropriate for 5–6 year olds. However, for students aged 5 years and older, all **six** transdisciplinary themes need to be addressed during the year. This flexibility is outlined in *Making the PYP happen: A curriculum framework for international primary education* (2007).

Teaching and learning, whenever possible and appropriate, should be within the school's programme of inquiry. However, there are occasions when this is not practical. During these times, teachers may use a number of the following models to teach subject-specific knowledge, concepts and skills.

- **Independent inquiry:** There are times when teachers will teach subject-specific knowledge, concepts and skills independently using purposeful inquiry. At such times, teachers should structure the teaching and learning through the use of the IB learner profile, the transdisciplinary themes, and the central ideas. They may make use of the PYP planner to structure their planning for this type of independent inquiry. Teachers should still ensure that authentic connections are made while maintaining the integrity and essential character of the subject area.
- **Preparing for or following on from a unit within the programme of inquiry:** The direct teaching of subject-specific knowledge, concepts and skills in a unit of inquiry may not always be feasible but, where appropriate, introductory or follow-up learning experiences may be useful to help students make connections between the different aspects of the curriculum. Teachers plan and teach learning experiences that prepare the students to participate in a unit of inquiry. Following on from a unit, students may demonstrate their understanding of the central idea in a subject-specific activity.
- **Skills-based teaching:** This refers to the teaching of subject-specific skills not directly related to a unit of inquiry but required for the development of the students' understanding. If undertaking a skills-based lesson outside the programme of inquiry, teachers should still recognize that the same philosophy and pedagogy must underpin their planning and teaching.

Evaluating a programme of inquiry

The PYP practice under standard C1 requires that:

There is a system for regular review and refinement of individual units of inquiry and the programme of inquiry.

Programme standards and practices: Practice C1.19 (IB 2005)

Schools should review and refine their programme of inquiry and scope and sequence documents regularly. As they continue to develop and refine their programme of inquiry, there should be continual cross-referencing with the scope and sequence documents.

Many schools choose to have a large printout of their programme of inquiry in a communal area that allows teachers (and often parents and students) to make comments about the units of inquiry and the overall programme of inquiry. The reflection on the relative success of the units of inquiry and the integration of the units throughout the programme of inquiry are important aspects of evaluating how well the programme of inquiry is working.

After teachers have spent some time teaching the programme of inquiry, there are likely to be changes that they wish to make to the units of inquiry. The school should determine the process they wish to use for incorporating these changes. For example, in some schools a request to change the units of inquiry is made at the end of the year and the whole staff reviews the requests in order to identify any possible redundancies or omissions in the school's programme of inquiry.

It is a useful habit to revisit regularly the theme descriptions under the transdisciplinary theme as a prompt for expanding the scope of the central idea and making it more substantial.

Resources

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Samples

Introduction

This **sample programme of inquiry**, together with the accompanying **sample planners**, provides a starting point for schools when developing their own programmes of inquiry.

Schools are required to address the transdisciplinary themes, maintain both a vertical and horizontal balance, and be able to defend the rationale for the inclusion of units in their programme of inquiry. The specific units of inquiry in this sample programme of inquiry are not mandated and schools are free to make use of them in any way that suits their particular needs. It is highly unlikely that this sample programme of inquiry will fully meet the needs of any individual school. For many reasons, including availability of resources, some units in the sample may not be appropriate for some schools.

A school's programme of inquiry should include all the in-depth, sustained science and social studies taught in the school. Every effort has been made to include a balance of these subject areas throughout the sample programme of inquiry. In addition, the sample programme of inquiry provides the opportunity for students to learn through language, mathematics, the arts and PSPE, as they engage with units that enable them to make sense of the world.

The PYP scope and sequence documents in science, social studies and PSE are formulated to articulate directly with the sample programme of inquiry and to highlight how these subjects are included in the units.

Please refer to the section "Guidelines for developing a school's programme of inquiry" for information and guidance regarding:

- transdisciplinary themes
- central ideas
- key and related concepts
- lines of inquiry
- role of the subject areas
- required number of units per year level.

Further information on all of these aspects of a programme of inquiry can be found in *Making the PYP happen: A curriculum framework for international primary education* (2007).

We have attempted to make this sample programme of inquiry as balanced, complete and user-friendly as possible. We would appreciate your feedback on the sample. We also invite schools to continue to send programmes of inquiry to the IB office in Cardiff.

Sample programme of inquiry

Age	An inquiry into: Who we are	An inquiry into: Where we are in place and time	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organize ourselves	An inquiry into: Sharing the planet
	<i>An inquiry into the nature of the self: beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; rights and responsibilities; what it means to be human.</i>	<i>An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.</i>	<i>An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.</i>	<i>An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.</i>	<i>An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.</i>	<i>An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.</i>
3–4	<p>Central idea Increasing awareness of our personal characteristics and abilities, and those of others, allows our self-identity to develop.</p> <p>Key concepts: form, perspective, reflection</p> <p>Related concepts: identity, relationships</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Physical, social and emotional characteristics My role within my family Recognizing similarities and differences between myself and others 	<p>Central idea Documenting personal histories allows us to reflect on and celebrate who we are and where we've come from.</p> <p>Key concepts: causation, change</p> <p>Related concepts: development (growth), family</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Ways of documenting personal history Personal change from birth to present: self and family Reflecting on past experience 	<p>Central idea* We use play to express our feelings and ideas and in order to come to new understandings.</p> <p>Key concepts: function, connection, perspective</p> <p>Related concepts: beliefs, representation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Communicating through play Imaginative use of everyday materials Games and toys 	<p>Central idea Our activity is usually connected to the Earth's natural cycles.</p> <p>Key concepts: change, connection</p> <p>Related concepts: cycles, interaction</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Night and day cycles (dark and light) Seasonal changes Health and safety as related to climate and seasonal changes 	<p>Central idea Communities function more effectively when rules and routines are shared with all members.</p> <p>Key concepts: causation, responsibility, reflection</p> <p>Related concepts: community, system</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Various communities we belong to Purpose of rules and routines Reaching agreement 	<p>Central idea Living things have certain requirements in order to grow and stay healthy.</p> <p>Key concepts: function, responsibility</p> <p>Related concepts: classification, living and non-living</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Characteristics of living things Our needs and the needs of other living things Our responsibility for the well-being of other living things
4–5	<p>Central idea Friends enrich our lives and require nurturing in order to develop.</p> <p>Key concepts: causation, responsibility</p> <p>Related concepts: conflict or cooperation, interdependence</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> How friends are made and kept Why friends are needed Characteristics that develop healthy friendships 	<p>Central idea Journeys create change and can lead to new opportunities.</p> <p>Key concepts: causation, change</p> <p>Related concept: choice</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Types of journeys people make Choices and decisions involved in making a journey Changes experienced because of a journey 	<p>Central idea Stories inform and provoke us, and give us pleasure.</p> <p>Key concepts: connection, perspective, reflection</p> <p>Related concept: communication</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What a story is What stories convey How stories are created and shared Feelings and emotions that stories evoke 	<p>Central idea Understanding the way materials behave and interact determines how people use them.</p> <p>Key concepts: function, change</p> <p>Related concepts: behaviour, prediction</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Behaviour and uses of materials Changing properties of materials Manipulation of materials for specific purposes 	<p>Central idea People use a variety of skills and strategies that contribute to their role in a community of learners.</p> <p>Key concepts: function, responsibility</p> <p>Related concepts: citizenship, independence</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Being part of a community of learners Skills, strategies and attitudes Making contributions to a community 	<p>Central idea Plants are a life-sustaining resource for us and for other living things.</p> <p>Key concepts: form, change, connection</p> <p>Related concepts: interdependence, systems</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What plants provide for us and for other living things The structure of a plant Caring for plant life
5–6	<p>Central idea* Making balanced choices about daily routines enables us to have a healthy lifestyle.</p> <p>Key concepts: function, causation, reflection</p> <p>Related concepts: balance, well-being</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Daily habits and routines (hygiene, sleep, play, eating) Balanced choices Consequences of choices 	<p>Central idea Communities are enriched by their members and the different perspectives they bring.</p> <p>Key concepts: change, perspective</p> <p>Related concepts: continuity, diversity</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What a community is People within a community The personal stories of community members 	<p>Central idea People recognize important events through celebrations and traditions.</p> <p>Key concepts: form, perspective</p> <p>Related concepts: beliefs, culture, values</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What traditions are How and why people celebrate Similarities and differences between various celebrations 	<p>Central idea All living things go through a process of change.</p> <p>Key concepts: change, connection</p> <p>Related concepts: cycles, transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Life cycles How living things change over their life time Developmental stages of various living things 	<p>Central idea Transportation systems are directly related to the needs of a community.</p> <p>Key concepts: function, connection</p> <p>Related concepts: systems</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Specific purposes of different transportation systems Factors that affect the kinds of systems that can be developed Relationship between transportation systems and the environment 	<p>Central idea People interact with, use and value the natural environment in different ways.</p> <p>Key concepts: causation, responsibility, reflection</p> <p>Related concepts: conservation, interdependence, order</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Local natural environment Human use of the local environment Actions that benefit or harm the local environment

Age	An inquiry into: Who we are	An inquiry into: Where we are in place and time	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organize ourselves	An inquiry into: Sharing the planet
6–7	<p>Central idea Homes reflect personal identity and local culture.</p> <p>Key concepts: form, connection, perspective</p> <p>Related concepts: creativity, diversity</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • The concept of home • Different types of homes • Circumstances that determine where people live 	<p>Central idea Public areas strengthen communities and provide people with opportunities to connect.</p> <p>Key concepts: function, connection</p> <p>Related concepts: cooperation, ownership</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Different public areas and their functions • How public areas develop • How these places differ from our homes 	<p>Central idea Imagination is a powerful tool for extending our ability to think, create and express ourselves.</p> <p>Key concepts: causation, perspective, reflection</p> <p>Related concepts: empathy, invention, transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • How we demonstrate and enjoy our imagination • How our imagination helps us to consider other perspectives • How imagination helps us to solve problems • The value of imagination 	<p>Central idea Understanding the properties of air allows people to make practical applications.</p> <p>Key concepts: function, causation</p> <p>Related concepts: force, energy</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • The evidence of the existence of air • What air can do and how we use it • The relationship between air, light and sound 	<p>Central idea* Systems need to be in place to maintain organization in communities.</p> <p>Key concepts: connection, responsibility</p> <p>Related concepts: interdependence, organization, systems</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • The concept of organization • Different systems of organization that we use personally • Different systems of organization in our community • Collection, storage and use of information for organization 	<p>Central idea People can establish practices in order to sustain and maintain the Earth's resources.</p> <p>Key concepts: change, responsibility, reflection</p> <p>Related concepts: lifestyle, resources</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Limited nature of the Earth's resources • Personal choices that can help sustain the environment • Reusing and recycling different materials • Reducing waste
7–8	<p>Central idea Relationships are enhanced by learning about other people's perspectives and communicating our own.</p> <p>Key concepts: perspective, reflection</p> <p>Related concepts: communication, empathy, open-mindedness</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Social interactions • Acknowledging others' perspectives • Managing and resolving conflict 	<p>Central idea The development of global perspectives is supported through understanding our place in the world in relation to others.</p> <p>Key concepts: connection, perspective</p> <p>Related concepts: context, location, orientation</p> <p>Lines of inquiry:</p> <ul style="list-style-type: none"> • How we represent place • Representations of place through time • The relationship of our location to other parts of the world 	<p>Central idea Through the arts people use different forms of expression to convey their uniqueness as human beings.</p> <p>Key concepts: function, perspective, reflection</p> <p>Related concepts: perception, self-expression</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • The diverse ways in which people express themselves • How everyone can express their uniqueness through the arts • The role of art in culture and society 	<p>Central idea The design of buildings and structures is dependent upon the environment and available materials.</p> <p>Key concepts: connection, responsibility</p> <p>Related concepts: structure, sustainability, transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Considerations to take into account when building a structure • How building impacts on the environment • Indigenous architecture 	<p>Central idea In a workplace people share responsibility towards a common purpose.</p> <p>Key concepts: function, causation</p> <p>Related concepts: cooperation, employment</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Purpose of a workplace • Interconnectedness of people in a workplace • Importance of a shared vision or common purpose 	<p>Central idea Over time, living things need to adapt in order to survive.</p> <p>Key concepts: change, connection</p> <p>Related concepts: adaptation, evolution</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Concept of adaptation • Circumstances that lead to adaptation • How plants and animals adapt or respond to environmental conditions
8–9	<p>Central idea Understanding different ways of learning enables people to respond to their own learning needs as well as those of others.</p> <p>Key concepts: function, perspective, responsibility</p> <p>Related concepts: diversity, motivation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Learning communities • How people construct knowledge • Different learning styles • How learning styles impact the way people engage in a learning community 	<p>Central idea Family histories provide an insight into cultural and personal identity.</p> <p>Key concepts: change, reflection</p> <p>Related concepts: chronology, history, tradition</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Family ancestry • Artifacts, heirlooms or rituals that have meaning in a family • Similarities and differences between generations within a family 	<p>Central idea A variety of signs and symbols facilitates local and global communication.</p> <p>Key concepts: form, connection</p> <p>Related concepts: culture, media, pattern</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Signs and symbols • Reasons for the development of communication systems • Specialized systems of communication 	<p>Central idea* Human survival is connected to understanding the continual changing nature of the Earth.</p> <p>Key concepts: causation, change, connection</p> <p>Related concepts: erosion, geology, tectonic plates, movement</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • How the different components of the Earth are interrelated • How the Earth has changed and is continuing to change • Why the Earth changes • Human response to the Earth's changes 	<p>Central idea Communities provide interconnected services designed to meet people's needs.</p> <p>Key concepts: function, causation, connection</p> <p>Related concept: networks</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Reasons people live in the local community • Services needed to support a community • Planning services for a community 	<p>Central idea Water is essential to life, and is a limited resource for many people.</p> <p>Key concepts: function, responsibility</p> <p>Related concepts: conservation, equity, processes</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Sources of water and how water is used • What happens to water after we have used it • Distribution and availability of usable water • Responsibilities regarding water

Age	An inquiry into: Who we are	An inquiry into: Where we are in place and time	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organize ourselves	An inquiry into: Sharing the planet
	An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; rights and responsibilities; what it means to be human.	An inquiry into orientation in place and time; personal histories; homes and journeys; the discoveries, explorations and migrations of humankind; the relationships between and the interconnectedness of individuals and civilizations, from local and global perspectives.	An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.	An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.	An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.	An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.
9–10	<p>Central idea What we believe is a part of who we are.</p> <p>Key concepts: perspective, reflection</p> <p>Related concepts: diversity, perception</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What we believe How beliefs influence the way we behave The impact of religion and spiritual traditions on society 	<p>Central idea Human migration is a response to challenges, risks and opportunities.</p> <p>Key concepts: causation, change, perspective</p> <p>Related concepts: population, settlement</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> The reasons why people migrate Migration throughout history Effects of migration on communities, cultures and individuals 	<p>Central idea Choices of role models reflect the characteristics that societies and individuals value.</p> <p>Key concepts: causation, perspective, reflection</p> <p>Related concepts: self-fulfilment, influence</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Role models and why we value them Why we should develop our own gifts, talents and interests How personal strengths can be applied to help others 	<p>Central idea Energy may be converted from one form to another and stored in various ways.</p> <p>Key concepts: form, function, connection</p> <p>Related concepts: conservation, transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Forms of energy The storage and transformation of energy Conservation of energy Renewable and sustainable energy 	<p>Central idea Marketplaces depend on the ability to produce goods and supply services that can be exchanged.</p> <p>Key concepts: function, connection</p> <p>Related concepts: interdependence, supply and demand</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Medium of exchange in various marketplaces Ethics of the marketplace How and in what ways we depend on people in other places How global movement and communication affect the availability of goods and services 	<p>Central idea Children worldwide face a variety of challenges and risks.</p> <p>Key concepts: function, reflection</p> <p>Related concepts: equality, rights</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Challenges and risks that children face and risks Ways in which individuals, organizations and nations work to protect children from risk
10–11	<p>Central idea Complex factors contribute to the process of making decisions that have implications for ourselves and others.</p> <p>Key concepts: causation, change, connection</p> <p>Related concepts: choice, systems</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Factors that influence our decisions Decision-making processes for groups and individuals Impact or consequences that decisions can have 	<p>Central idea Past civilizations shape present day systems and technologies.</p> <p>Key concepts: causation, change, perspective</p> <p>Related concepts: continuity, progress, technology</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Aspects of past civilizations that have survived Reasons these systems and technologies developed Why modern societies continue to use adaptations of these systems and technologies Implications for the future 	<p>Central idea Rituals, traditions and artifacts provide a window into the beliefs and values of cultures.</p> <p>Key concepts: function, perspective, reflection</p> <p>Related concepts: beliefs, diversity</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> What constitutes a culture Significance of rituals and traditions How artifacts symbolize beliefs and values 	<p>Central idea The fact that materials can undergo permanent or temporary changes poses challenges and provides benefits for society and the environment.</p> <p>Key concepts: form, function, responsibility</p> <p>Related concepts: measurement, transformation</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Nature of chemical and physical changes Practical applications and implications of change in materials Ethical dilemmas associated with manufacturing processes and by-products 	<p>Central idea Governmental systems and decisions can promote or deny equal opportunities and social justice.</p> <p>Key concepts: function, responsibility or governance</p> <p>Related concepts: equality, government</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Types of governance Principles of human rights and social justice The effect of institutional behaviours and attitudes on social justice 	<p>Central idea Biodiversity relies on maintaining the interdependent balance of organisms within systems.</p> <p>Key concepts: connection, responsibility, interdependence</p> <p>Related concepts: balance, biodiversity, interdependence</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> Interdependence within ecosystems, biomes and environments Ways in which organisms are interconnected in nature How human interaction with the environment can affect the balance of systems

Age	An inquiry into: Who we are	An inquiry into: Where we are in place and time	An inquiry into: How we express ourselves	An inquiry into: How the world works	An inquiry into: How we organize ourselves	An inquiry into: Sharing the planet
11–12	<p>Central idea Personal well-being is dependent on a complex balance of interconnected factors.</p> <p>Key concepts: change, responsibility</p> <p>Related concepts: growth, relationships</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • The concept of “well-being” • Factors that contribute to well-being (physical, mental, social and spiritual) • Personal issues affecting our well-being 	<p>Central idea Exploration leads to discovery and develops new understandings.</p> <p>Key concepts: form, perspective, reflection</p> <p>Related concepts: consequences, discovery, geography</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Reasons for exploration (historical and personal) • Feelings and attitudes associated with exploration • What we learn through exploration • Methods of navigation 	<p>Central idea People’s outward appearance can lead to perceptions and misconceptions.</p> <p>Key concepts: function, perspective, reflection</p> <p>Related concepts: creativity, diversity, stereotypes</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Personal adornments, clothing and identity • Reasons for what people wear • Impact of first impressions • Countering misconceptions 	<p>Central idea Reproduction of living things contributes to the continuation of the species.</p> <p>Key concepts: change, connection</p> <p>Related concepts: cycles, growth</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Reproduction as part of a life cycle • Reproductive processes • Genetics and hereditary factors 	<p>Central idea Technology impacts on the world of work and leisure.</p> <p>Key concepts: change, connection, responsibility</p> <p>Related concepts: communication, systems, ethics</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Technology and inventions of the home, workplace and leisure activities • Circumstances that lead to the development of important inventions and their impact • How technology supports/impacts sustainability 	<p>Central idea* Finding peaceful solutions to conflict leads to a better quality of human life.</p> <p>Key concepts: causation, perspective, responsibility</p> <p>Related concepts: conflict, diversity, justice</p> <p>Lines of inquiry</p> <ul style="list-style-type: none"> • Causes of conflict • Conflict resolution and management • Living and working together peacefully

In the students’ final year of the PYP, there are five units of inquiry and the exhibition. The exhibition may be related to any transdisciplinary theme at the discretion of the school. This sample programme of inquiry has included six units of inquiry in the final year, any one of which could be replaced by the exhibition. Only IB World Schools are required to participate in the exhibition although candidate schools may choose to do so.

* Sample planners have been developed for those units marked with an asterisk.

Sample planners

The five sample planners that follow are derived from the PYP sample programme of inquiry. They have been developed by PYP practitioners and trialled in PYP schools, and are intended to support PYP teachers in developing and documenting units of inquiry from their own school's programme of inquiry.

Like all PYP planners, the sample planners should be viewed as “works in progress”, subject to ongoing modification and refinement. Developing units of inquiry in the PYP is collaborative and reflective in nature, and these documents represent the first step in the process. Teachers may implement any of the sample planners but are advised to modify them to reflect the uniqueness of their school's programme of inquiry, the circumstances in which they are teaching, and the students with whom they are engaging.

The **PYP “bubble” planner** includes stage-by-stage guidelines to inform the use of a PYP planner. It can be found, together with further information on all aspects of planning and developing a transdisciplinary unit of inquiry, in *Making the PYP happen: A curriculum framework for international primary education* (2007).

It will be noted that the layout of these sample planners varies a little from one to the other. The PYP planner template is designed to be flexible in format, to allow teachers to change the style or size of the text, or to alter the size of the boxes in order to accommodate the text. The PYP planner template can be downloaded from the online curriculum centre (OCC).

1. What is our purpose?

To inquire into the following:

- transdisciplinary theme

How we express ourselves: An inquiry into the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.

- central idea

We use play to express our feelings and ideas and in order to come to new understandings.

Summative assessment task(s)

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

Teachers develop a rubric or checklist to assess the students at the beginning and end of the unit. The student always/usually/rarely/never:

- verbally expresses feelings and ideas
- physically expresses feelings and ideas
- visually expresses feelings and ideas
- participates willingly in individual play
- participates willingly in parallel play
- participates willingly in group play
- spontaneously uses everyday materials appropriately
- spontaneously uses everyday materials creatively.

Each student is asked to draw and explain a picture of "What have I learned?" These drawings with captions are collected in a class book.

Class/grade:

Age group: 3–5

School:

School code:

Title:

PYP planner

Teacher(s):

Date:

Proposed duration: number of hours

over number of weeks

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Function, connection, perspective

What lines of inquiry will define the scope of the inquiry into the central idea?

- Communicating through play
- Imaginative use of everyday materials
- Games and toys

What teacher questions or provocations will drive these inquiries?

Why do we play?

Why is play important?

How do we play alone or with others?

What do we do with toys and games? What do they help us learn?

How can we play without toys and games?

The teacher sets up a variety of centres in the classroom, such as an art and craft area, a puppet theatre, a construction and technology area.

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

- Ask parents to discuss and draw with students the games they prefer. Students can show these to the class and show others how to play their favourite games.
- Set up centres in the classroom. Students can move freely from one centre to another. Use the summative assessment rubric to observe the students and to take notes at the beginning of the unit (see rubric or checklist criteria in box 1).

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

- Ongoing anecdotal records and photographs will be kept as teachers observe and document students' behaviour during play—these records will generally follow the rubric or checklist criteria.
- Significant and relevant questions, comments and actions during student-to-student conversations and play will be recorded as a means of determining students' ability to express themselves and learn new things through play.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

- Art and craft materials
- Drawing and writing materials (whiteboards, markers, pencils, crayons, paper)
- Different toys and games from around the world
- Puppets and puppet theatre
- Dramatic play materials (costumes, props)
- Junk or waste or recycled materials (cardboard, egg cartons, fabric)
- Different kinds of music and musical instruments
- Sand and water tables
- Geometric shapes
- People (parents, PE teacher, older students)
- Computer games

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

Different centres in the classroom (art and craft, language and maths centre, dramatic play, puppet theatre, music and movement, construction and technology, floor and table games).

Places outside the school will be visited, eg a farm, playground, or sport field.

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

The teacher provides the context for inquiry

- Set up centres in the classroom. Throughout the unit, add and remove materials and equipment as needed.
- Students visit a local playground where they are able to use the facilities in order to play new games.
- Invite parents, other teachers, the PE teacher or older students from school to teach the students different games from around the world or from past times.
- Involve the students in identifying the procedure of different games to be played, in groups, outside and inside the classroom, eg hand games, musical games ("What do we need?" "What are the rules?").
- Circle time: use different types of music and musical instruments to facilitate the expression of feelings by dancing, singing, playing different instruments and so on.
- Involve students in conversations or dialogues using puppets or puppet theatre and dramatic play materials, with the focus being narrative, stories, and beginning-middle-end.
- Model the different centres for the students including numeracy and literacy skills for students.

Leading and facilitating student inquiry

- Students make up games in pairs or small groups using a variety of objects or props, both in the classroom and in the playground. They teach the game and its rules to another member of the class.
- Students create sculptures, masks, costumes, constructions, toys, animals etc from waste and craft materials. Students develop an exhibition of their creations and explain what they like best and why.
- Students make sock or finger puppets for puppet theatre. They tell a story or use puppets to solve daily conflicts.
- Students draw freely with a variety of colouring pens, pencils, paints and crayons and explain their drawings to the teachers, who write a caption. Drawings are displayed in the school. These drawings will include 1) showing two aspects of play (individual and with others) and 2) "What I have learned" (summative assessment).
- Students move between the different centres in the classroom, applying the new skills they have acquired during the inquiry.

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Transdisciplinary skills

Communication skills

- Listening: to guest speakers, peers, music and movement activities, stories
- Speaking: on puppet theatre, dramatic play, explaining and retelling stories
- Non-verbal: present in drama, music activities, art and crafts

Social skills

- Cooperating: taking turns, sharing of materials, creating in groups
- Adopting a variety of group roles: in drama and home corner

Self-management skills

- Gross and fine motor skills: movement, games, sports, art and craft activities
- Codes of behaviour: their behaviour towards others during dramatic play—sharing, taking turns—and following rules in games

Learner profile

Inquirers: creative use of everyday material in the classroom, use of waste or recycled materials.

Open-minded: sharing toys and games, playing with different toys and games, accepting different ways of playing with toys and games, listening to others' presentations.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

Students drew pictures of "What have I learned?" Drawings were gathered in a class book. Some examples included the following pictures: students taking turns at the slide ("I learned to take turns"); shaking hands after a game ("We learned to play with our friends, and we don't care if one loses or wins, because we are friends"); writing letters and numbers ("I learned to play with letters and write them").

There was a discussion among the teaching team about whether this unit allowed enough opportunities for inquiry. Children inquire naturally in any environment and we did not feel we were regularly adding or providing the "unknown element" to be discovered. However, we were able to collect evidence of our students learning about play and learning through play.

As this is an ongoing unit of inquiry, samples are collected and demonstrations of the students' understandings are observed and noted throughout the year. This inquiry provides a good opportunity to observe **how** students learn, more than **what** they learn, and for us to be aware of the different learning styles and provide them with appropriate experiences.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

Assessment was ongoing throughout the unit and was all relevant all of the time. We would add the following two criteria to the rubric for next time:

- is able to respect others
- is able to organize his or her work.

We would remove the "parallel play" criterion because this was not an aspect that we felt could improve during the inquiry.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

As an open choice experience, students felt free to express their feelings and ideas. Students with social and motor difficulties felt free to act confidently and spontaneously. They started using their drawings to express ideas to others. They created plenty of decoration and costumes to use during recess. They wanted to present their show to other classes.

There was reflection on values and attitudes all the time, as the students needed to agree while acting or playing, choose leaders for some games, or organize turns to use materials or to talk in front of the group. We can also find these values in their summative drawings for the class book.

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Key concepts

Connection: The students depended on each other to play in groups. They also applied what the teachers modelled for them to their own work and play. The craft exhibition showed students making connections between their prior learning and new learning as well as working together to produce pieces.

Function: The students had to learn how to use the different areas and specific materials, understanding their purpose and rules. They developed the ability to observe, identify, describe and categorize, eg by using puzzles, constructing.

Perspective: The students demonstrated an understanding of perspective when accepting facts and opinions and taking turns when creating and playing, in the puppet show or the story to be presented to others.

Transdisciplinary skills

In all their games, the students demonstrated **communication** and **social skills**.

Learner profile

The ongoing nature of the unit meant that students demonstrated all the attributes of the learner profile. The following have been identified as the most apparent in the learning experiences:

Inquirers: Students developed their curiosity constantly, eg by construction of puppets, using various materials, exploration of mathematical concepts using concrete materials (blocks, shapes) as well as by their own invented activities, counting, sorting, matching, predicting.

Risk-takers: This was demonstrated in the way students learned to act and speak in front of others; to work with unfamiliar materials or play with new games; to continue to try hard when they couldn't immediately do something. We saw during this unit that students acted more as seekers than as followers, as they used their initiative to choose or develop different experiences. Also it allowed students to correct and assess themselves. This helped them to develop self-esteem as well as autonomy and independence.

Balanced: Students learned the value of balanced play—to play outside or inside; to play alone, with a friend or in groups; to play quietly or actively; to speak or to listen to others; to be creative and to appreciate the creativity of others. This, in turn, meant that they became more **open-minded** to the views of others.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

How do I take care of things?
Can I play that with more children?
How can we take care of things?

The students asked mainly closed questions (such as “Can I use this?” or “How do I play with this?”), but as the unit developed many wonderings were expressed, such as:

We need to take turns in order to be able to play.

We have more friends after we learn all these games in the playground.

Take care of the material, clean it and make order in the classroom.

We have to learn to win or lose, and still be friends.

It is good to have silence while we work.

To learn, we have to try hard when we cannot do something.

I like to teach others.

At this point, teachers should go back to box 2 “What do we want to learn?” and highlight the teacher questions or provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

- The students wanted to improve some corners, adding some materials like a water table.
- The students organized different rules for group activities, eg “Who is the leader?”
- The students initiated a bookstore, where they could go and get a book.
- The students taught new games to students who had been absent.
- The students made costumes, such as masks and necklaces for their play.
- The students made a list of their favourite activities to pass on to the teacher who would take the group next year.

9. Teacher notes

It is very important that in setting up the learning environment, we are selective and thoughtful about the purpose and quality of materials we have available for use by the students. These materials allow students to gain new information and to make connections to previous understandings, therefore facilitating the learning process.

It is when a student is working that we have the best opportunity to enrich their vocabulary, providing the necessary language to increase the thinking process and the understanding of new concepts.

Dual language aspect

Because this was a bilingual classroom, with teachers of both languages of instruction always present, students switched naturally from one language to the other, depending on who they were talking to at the time and the context of their discussion (eg English following the reading of an English story). In most collaborative situations, students chatted freely in their mother tongue, and this was allowed by the teachers as it gave them the opportunity to see whether conceptual understanding was being expressed. Therefore, while all the student questions, wonderings and learning experiences are recorded here in one language, they naturally occurred in both.

1. What is our purpose?

To inquire into the following:

- transdisciplinary theme**

Who we are: An inquiry into the nature of the self; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; rights and responsibilities; what it means to be human.

- central idea**

Making balanced choices about daily routines enables us to have a healthy lifestyle.

Summative assessment task(s)

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

One-to-one conferences


Teachers use anecdotal records gained through observing students' choices during the unit, as well as pictures of healthy and unhealthy lifestyles, as stimulation during individual conferences, and take notes. Teachers ask questions such as: "What balanced choices do you make throughout the day?" "Why do you choose to do this?" and "What changes could you make for a healthier lifestyle?"

Teachers look for evidence including the students' examples of balanced choices and the reasons they give about why these enable them to lead a healthy lifestyle.

Teachers complete an assessment rubric following the conference that indicates whether:

- the student needs more time and further experiences
- the student is developing and making positive progress
- the student has developed an independent and advanced level of thinking.

Teachers keep a record of the conference notes and rubric in the student portfolios.



PYP planner

Class/grade:

School:

Title:

Teacher(s):

Date:

Proposed duration: number of hours **over number of weeks**

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Function, causation, reflection

What lines of inquiry will define the scope of the inquiry into the central idea?

- Daily habits and routines (hygiene, sleep, play, eating)
- Balanced choices
- Consequences of choices

What teacher questions/provocations will drive these inquiries?

What routines do we follow in a day and why?
 What does it mean to have balance in your daily life?
 What choices do we make throughout the day for a healthy life?
 What happens if we make good or bad choices?

Provocations

- Pictures of healthy and unhealthy lifestyles on classroom walls
- Flashcards and books about health and safety on tables
- Cleaning material or untidy areas in the classroom

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

Daily routine flashcards

Students sequence flashcards and tell a story about their day. Teachers record the students' stories using a cassette recorder. Evidence to look for: students' abilities to describe their current daily routine and to include any examples of healthy choices they already make (eg physical activities, sensible bedtimes, choices of food).

Mind Maps®

Teachers show pictures of healthy and unhealthy lifestyles. Students sort pictures into two categories: healthy and unhealthy. They mind map thoughts and ideas. Look for students' examples of what it means to be healthy and unhealthy in their lives in more than one area, eg eating habits, physical activity and personal hygiene.

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Sticker chart (Headings: Hygiene, Healthy eating, Exercise, Safety, Rest)

On a daily basis, students award themselves stickers for healthy choices they make throughout the day, giving reasons for their choice. Look for students' explanations for awarding or not awarding themselves a sticker.

Students make use of their "Reflection journal" to record:

- questions for guest speakers (what we want to find out)
- the effects before, during, after activities, eg exercise, eating, rest
- their drawings, comments, questions, survey results
- photographs and other recordings of the students engaged in inquiry.

Evidence to look for: students' examples of, or questions on, healthy and unhealthy choices.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc. will be available?

- Books, stories and songs about health and safety
- <http://www.city.toronto.on.ca/health/healthyteating.pdf>
- <http://www.dole5aday.com; www.fotosearch.com/photos-images/healthy-choices.html>
- Daily calendar, daily routine flashcards, hygiene or safety flashcards

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

Students create health centres in the classroom, including authentic items or artifacts: information centre (books, pictures from library or home); fitness centre; resting area; hygiene and safety area; and kitchen area.

People and places in the local community: dental nurse, doctor, yoga instructor, traffic police officer; fitness centre, grocery shop, hospital, park.

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

The teacher provides the context for inquiry

- Teacher-led presentation (role play or show pictures of two different lifestyles—balanced and unbalanced) to provoke inquiry. View videos, pictures, books, CDs about daily routines, health and safety—elicit questions, keep record of significant and relevant comments.
- Invite guest speakers to discuss health and safety issues (eg PE, drama or music teacher, kitchen and cleaning staff, yoga instructor, dental nurse, clinic, gym, playground, park)—to discuss health and safety
- Field trips (eg school kitchen, grocery shop, clinic, gym, playground, park)—to discuss health and safety issues as well as balanced healthy choices regarding food and exercise.
- Class discussion on consequences of our choices—use Edward De Bono's thinking tool: consequence and sequel. Topics to include—sunbathing, watching TV, playing computer games, exercise, eating junk food, wearing braces; pros and cons, short-term and long-term consequences.
- Make circle time books. Students draw clocks with specific times and illustrate the activities carried out at that time, eg I get up at seven o'clock (7:00).

Leading and facilitating student inquiry

- Home project. Students make "My healthy day" storybooks and present to the rest of the group. They use drawings, photographs and pictures, etc and give reasons for the healthy choices they make throughout the day. (Guidelines will be given for parents—to include an explanation of the task and assessment procedures in the "Unit overview" sent to parents at the beginning of the unit.)
- Collaborative groups create health centres in the classroom (information centre, fitness centre, resting area, hygiene and safety area, kitchen area).
- "Hygiene detectives". Students dress up as detectives and look for unhygienic or unsafe areas in the school.
- Students identify the major food groups and place them into a food pyramid or classify them in any way they believe they could be grouped, ie colour, texture, taste, source and other things they may know about food. They compare and contrast different food pyramids from different parts of the world and then devise their own. Students create a balanced menu for lunch using their knowledge of the major food groups and the food pyramids.
- Survey. Students examine how students in other classrooms relax or rest throughout the day—discuss outcomes, and then students plan a "Pyjama afternoon" to experience different ways to rest or relax.
- Students organize and lead a week of recess activities: dances, games, role play, walks, etc, including a set of safety rules.
- Students create poster(s) for school lobby—personal hygiene, exercise, rest, healthy eating, and safety.

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Transdisciplinary skills

Self-management skills

- Organization: creating health centres in the classroom; leading a week of recess activities
- Safety: devising a set of safety rules for the playground; discussing outcomes of detective investigation; road safety experience
- Healthy lifestyles: planning and leading activities or days
- Informed choices: creating their own food pyramid and balanced menu for lunch; lunch box or rest survey; preparing a healthy snack

Thinking skills

- Analysis and synthesis of the major food groups, of the different food pyramids, the creation of a healthy snack and a balanced lunch menu

Learner profile

Balanced: Students plan and lead afternoons or days at school.

Reflective: Students will reflect through use of circle time book, sticker chart, storybook "My healthy day".

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

The health centres were a great provocation for the students to make balanced choices. The students developed from playing the same game repeatedly, alone or with the same classmate, to playing a variety of games (music, puzzles, skipping and role play) with different classmates and taking turns. They began to take responsibility for personal hygiene (washing hands, brushing teeth) and responsibility for tidiness and safety. They took time to rest or relax—read a book, take a nap or draw a picture. They also began to choose healthy snacks. They have often expressed their reasons for making these choices, showing the awareness that choices have consequences.

Some examples of student comments following this unit

(After skipping with the rope) "I'm tired now. I'll have a drink and then rest to get my energy back."

"I have kiwi for snack... now my white blood cells will get the vitamins to fight the germs."

"When we dance, that's exercise too, right, because we are moving our body?"

"The bin was next to the towel again... I moved it to the other corner then I washed my hands."

The students also drew or painted pictures to represent their understanding of the central idea.

"The Good Health Alphabet Book" is a good example: E=Exercise (Eve drew a picture of herself dancing to music), F=Friends (Grace drew a picture of herself playing with friends), H=Hygiene (Anish drew a picture of himself washing his hands dotted with germs).

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

The "Reflection journal", the sticker chart, "My healthy day" storybook and the one-to-one conferences provided a rich source for the teachers and classroom assistant to observe, record evidence of and assess each student's understanding of the central idea. However, we would provide the students with greater freedom to organize and lead their own days or afternoons to allow for more authentic and independent inquiry into the central idea.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

The students showed tremendous curiosity about what is beneficial or harmful to their bodies. They were fascinated by "germs" and wanted to know what germs look like and how they are harmful to us. They also enjoyed exploring the commonalities and differences of human experiences. When inquiring into the major food groups, two of the students said that they do not eat meat: one student is allergic to dairy products and another to some fruits, so the others wanted to find out what sources these students rely on for proteins, calcium and vitamins.

Students have developed in all domains—physical, social, emotional, intellectual and aesthetic. They show respect towards the school's cleaning staff and local community helpers (eg traffic police officer) and appreciate what others do for their well-being (eg parents prepare a healthy snack for them every day). They are cooperative in keeping the classroom, playground and school clean and tidy. They take turns when playing, try to find solutions when disagreements arise and are now totally independent in choosing, planning and leading activities.

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Key concepts

Function: The teachers presenting and role-playing different lifestyles and the participation of guest speakers have provided role models for the students to see how healthy and unhealthy lives are led.

Causation: The "Finding germs" science experiment helped the students to understand that our actions have consequences, eg "Don't bite your nails, Arya, or the germs will go into your tummy," and "if we don't brush our teeth, the food gets stuck and makes holes in our teeth."

Reflection: During the one-to-one conferences, the students made proposals for changes they, their friends and their family members could make for a healthier lifestyle, eg "Mummy could exercise outdoors in the fresh air rather than following exercises on TV."

Transdisciplinary skills

Self-management skills

Organization: There was good teamwork and team spirit during the planning of and the setting up of our health centres; leading a week of recess activities has given the students the opportunity to organize their own learning and that of others, taking into consideration different learning styles and abilities.

Safety: Some students kept playing the role of hygiene or safety detectives during and after our unit of inquiry.

Healthy lifestyles: Planning and leading a day of activities has provided ample evidence that the students lead a healthy lifestyle.

Informed choices: "What's in the lunch box?" and the "Rest" surveys have led the students to inquire into what a balanced meal is and different ways to rest.

Thinking skills

Analysis and synthesis of the major food groups and the different food pyramids have helped the students to create a balanced meal and a healthy snack by themselves.

Learner profile

Balanced: By making the "My healthy day" storybook, the students could show their understanding of how making balanced choices leads to a healthy lifestyle.

Reflective: The students reflected on when and why they deserved to award themselves a sticker with the sticker chart, thus showing awareness of when they were making a healthy choice and the consequences that it entails.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

- What can we do if someone tries to hurt us?
- What can we do if someone is driving dangerously?
- Where does milk come from?
- What do germs look like?
- What do I do if someone is teasing me and I get angry?

At this point, teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions or provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

- At home, many students drew pictures of germs infesting our environment and of healthy choices, eg a drawing of themselves playing with friends, eating fruits or wearing a helmet when riding a bike.
- The creation of our "Healthy food shop" and "McPlay restaurant" to encourage healthy eating in the classroom.
- Some students practise yoga exercises when they have problems falling asleep.
- Students brought in music CDs from home to encourage dancing as a form of exercise, and books in their mother tongue about healthy and unhealthy lifestyles.
- Students remind their parents to prepare a healthy snack for them to take to school.
- Students tell us they brush their teeth thoroughly before going to sleep and we see them do so at school after eating sugary foods.
- Students who loved "junk food" still do, but have decided to eat it as a treat once a week.
- Some students avoid being near people who smoke and specifically say why.
- Students spontaneously analyse what their friends and family members are eating for breakfast, lunch and dinner.

9. Teacher notes

The planning of this unit together in line with the school's scope and sequence documents was a smooth task. Examples of the physical education (PE) and personal and social education (PSE) strands were incorporated into this unit.

PE

Health-related activities: recognizing and appreciating the importance of physical activity and maintaining a healthy lifestyle, aspects of nutrition and exercise together with a consideration of safety, physical change both temporary and long term caused by physical activity.

The PE teacher remarked that the students are now aware that doing sports is not only about playing games but that movement is important for their physical well-being.

PSE

Health and safety: aspects of overall health including nutrition and control of diseases, positive lifestyle choices to promote and maintain health, safe practices and environmentally responsible behaviours used in the home, school and community.

The lunchroom staff remarked that the students analysed what the others had for lunch—whether it was a healthy or unhealthy choice and why.

When planning this unit, we had a discussion with previous year level teachers to ensure that we were informed about the kind of prior learning that students might bring to the inquiry. During this process, we found that other units about healthy choices later in the school's programme of inquiry might need some revising to avoid repetition, as this inquiry seemed particularly relevant to this age group.

1. What is our purpose?

To inquire into the following:

- **transdisciplinary theme**

How we organize ourselves: An inquiry into the interconnectedness of human-made systems and communities; the structure and function of organizations; societal decision-making; economic activities and their impact on humankind and the environment.

- **central idea**

Systems need to be in place to maintain organization in communities.

Summative assessment task(s)

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

(Open-ended task) Students create a Mind Map[®] or flow chart of the different organizational systems they use at school and at home and of those people (including themselves) who are involved. Students draw and/or write what they believe to be organized, the parts of the systems used and who is responsible. Students also describe how the absence of any of these systems would affect other systems and the community. This assessment will be done at the beginning of the unit and will be repeated at the end of the unit.

Teachers will assess both the before and after Mind Maps or flow charts for the degree of student awareness of how each system is related to the people involved, to other systems, and to the students themselves.

Student self-assessment: Students will be given the opportunity to explain verbally the differences in their before and after Mind Maps or flow charts.

Portfolio and document management: As the unit progresses, students will be asked to organize their own portfolios. A student-designed rubric will be used to assess the students' abilities to decide what parts will make up their system; to categorize their work; to store with other portfolios; to be responsible for adding to their portfolio, etc. Students will then assess each other's systems by trying to find particular pieces of work on the computer or among the portfolios.

Class/grade:

Age group: 5-7

School:

School code:

Title:

Teacher(s):

Date:

Proposed duration: number of hours

over number of weeks



PYP planner

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, and responsibility, reflection) to be emphasized within this inquiry?

Key concepts: connection, responsibility

Related concepts: interdependence, organization, systems

What lines of inquiry will define the scope of the inquiry into the central idea?

- The concept of organization
- Different systems of organization that we use personally
- Different systems of organization in our community
- Collection, storage and use of information for organization

What teacher questions/provocations will drive these inquiries?

- What does it mean to be organized?
- What or who helps us to remember what we need to do and have at school each day?
- Of what is a system made up?
- What systems are in place in our school and community?
- What systems help us to solve and prevent problems?
- What is the role that technology has in the way systems operate within our community?

Provocations

- Give students a list of activities to complete within an afternoon session. Allow the students to organize their own time to complete these activities. At the conclusion, discuss the number of activities completed by each student. Why did some students complete a lot and some students complete a few activities? What things did you need to think about when you were doing the activities?
- Create a "Day of chaos". Students are placed in a classroom environment where their books, maths manipulatives and other classroom materials have been taken from their shelves and it is up to the group to decide how to organize these materials most effectively and to explain the reasons for their organizational decisions.

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

- Discuss with students how they organize themselves on a daily basis (eg time, clothes, books, etc) in order to identify the connections the students make with systems they know help to organize themselves.
- In small groups, students draw and explain the parts of a calendar to ascertain understanding of months of the year and days of the week, and how calendars are used in order for us to organize our lives.
- Give students a simple data handling exercise (eg reporting back to the class on all colouring utensils in the classroom), and assess their ability to collect, record, organize and interpret the data.

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

- Through the "Day of chaos" provocation (see box 2), students will be asked to identify the system(s) that have been disrupted or changed and to explain how that change has impacted their classroom as an organization.
- Students will conduct a survey of people in the school who need to be organized (see box 4), explain from the results why they need to be organized and how the systems they use help them to stay organized.
- As part of the daily activity sequencing task, students explain verbally why activities are arranged in this order.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

- Clocks (digital and analogue), timetables, schedules, calendars, newspapers, *outside libraries, local magazines*, fiction and non-fiction texts
- Computerized filing systems
- School personnel (eg librarian, ICT technician, PE teacher, office manager or secretary, cafeteria staff, custodian or janitor)
- Stimulus photographs, film clips, documentary programmes of classrooms from other parts of the world, eg <http://www.fotosearch.com>; <http://www.google.com> (visual search)

How will the classroom environment, local environment and/or the community be used to facilitate the inquiry?

Visiting other classrooms in own school and perhaps in other schools.

Visiting the central library.

Principal, teachers and office staff will provide students with examples of the ways they organize themselves on a daily basis. These will include timetables, diaries, computer files and folders, paper files and folders, boxes, shelves, etc.

Reorganization of the classroom environment for the "Day of chaos".

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the key questions?

The teacher provides the context for inquiry.

- Students visit other places in the school and try to identify and compare similar and different systems to those that are in place in their classroom (eg library, sports shed, computers, car park, school bags, portfolios).
- Students draw and write down their daily activities and sequence them.
- Students create a maximum of three questions that they would like to ask the people who work in the school about the systems they use to organize themselves. Students collate responses and share findings with their peers with the focus on who in the school helps us to solve and prevent problems on a daily basis.
- Students use a variety of images of classrooms from around the world to compare with their own—students focus on where students sit, where their resources are stored, how things are displayed and imagine how comfortable they might feel to learn in such a classroom.
- Students explore the features of a variety of schedules and timetables (daily, weekly and annual) both within the school and the wider community. (See box 5 for specific examples.) In groups, students share how these schedules and timetables are used within the system to which they relate, and how the people who run the system use these schedules and timetables to help organize people, items and events.
- Portfolios as a system: discuss the current way that we store evidence of learning in our portfolios. What other ways could we do this? How do other people in the school organize and store information? What are the strengths and weaknesses of our portfolio system? What could we do to improve it?
- Students visit the school library and the city's central library. *They talk to the librarian about lending systems and look at how books are organized (in central library, just on one floor).*

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Transdisciplinary skills

Research skills: Through the exploration of a variety of organizational systems and through collecting and sorting the data they have collated, students distinguish common features of each example related to how we can best organize ourselves.

Thinking skills: Analysis of the parts of a variety of organizational systems (ie timetables, schedules, cataloguing systems, etc) and how they work together in order to see relationships between them and to find unique characteristics in each example.

Self-management skills: During the organisation of the classroom, students will need to demonstrate spatial awareness, time management skills and the ability to make informed choices about how a system can be made to work.

Learner profile

Knowledgeable: Through exploring the various organizational systems in the home, school and local community, students will be better able to explain how people and organizational structures are connected to make our lives more efficient.

Reflective: Through giving thoughtful consideration to their own daily experiences and how they are contributing to helping those around them. Also through self-evaluation of how responsible they believe they are at following timetables and schedules and other organizational structures in their school and at home.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

Although the students were able to understand the concept of organization and could explain why people need to be organized, they found it hard to relate this concept to their home life because so much of their personal organization was done by others.

The students became fully aware of how the systems in their classroom helped them be organized when they had them removed in the "Day of chaos". Most students chose to reorganize the classroom in the same way as before, but some recommended improvements (eg moving the hooks for hanging their bags closer to the door), which were either noted down for future reference (eg in the above example) or acted upon immediately.

The visit to the central library probably brought about the most dramatic evidence of the students' understanding of the need for systems in the wider community, particularly when they were shown the difference between a computerized lending system and a manual one. Some of their personal reflections after the visit included: "a very big system", "the librarian was the most organized person in the world", "there are thousands of books on one big list".

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

The assessment tasks were probably the best that could be done with students of this age. It was difficult for students to devise their own organizational systems at home because systems were already in place. It would have lacked authenticity if we had asked the students to devise systems just for the purpose of this unit. The students have very little control of the organizational systems used in their home environment as they nearly all have helpers who take control of these issues.

The daily activity sequencing assessment task was relevant to the students to understand how to be organized in their everyday lives. The students can reflect on the ways in which they could improve their organizational habits.

We assessed the students' understanding about organizations in our community through the visit to the central library. Next time, we need to organize more field trips to different organizations such as the post office, local food markets, and the kindergarten campus. Alternatively, we could design a task for them to visit different organizations with their parents.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

The students could explain the need for organizational systems but it was difficult for them to make changes to or be responsible for their own personal organizational systems outside the classroom.

The students became familiar with the systems of organization in our school, but they do not have sufficient knowledge and understanding regarding the systems of organization in our community. It might be a more suitable topic for the upper grade students.

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Key concepts

Connection: Students from a higher grade shared a PowerPoint® presentation of the photos they took during their recent field trip to a local school. The focus of their sharing was on the connections between the way their school and classrooms are organized in comparison to the local school. As a result of this sharing, our own students were able to understand what was the "same" and what was "different" about their learning environment.

Responsibility: Students explored their own roles and responsibilities and those of people around them through analysis of the various organizational systems that were present in their immediate and local environments.

Transdisciplinary skills

Self-management skills

Organization: By identifying organizational structures in place at school and at home the students were able to see why it is important to be organized, develop their self-management skills, analyse parts of a system and accept responsibility for personal organizational systems.

Thinking skills

Students were required to demonstrate their ability to ascertain what they wanted to find out about people's roles in systems through **formulating questions** they wanted to ask, through **processing the data** they collected and presenting the findings of their research.

Evaluation: In art and PE, the students were encouraged by the teachers to reflect upon how they needed to organize themselves and the equipment required when playing a game or designing an art piece, and then to evaluate the effectiveness of their actions in order to become more autonomous in the future.

Learner profile and/or attitudes

Inquirers: Students showed curiosity in the way that computers are used to organize information, and also in the way that systems work in their homes and at school.

Knowledgeable: Students became considerably more knowledgeable about what a system is made up of and about how we organize ourselves on a daily basis. They encountered a lot of new "knowledge" about how computers are used to organize work, and how many other students do not have the same help organizing their homes as they do. This came as a surprise to them!

Reflective: Students were reflective about children in other countries or in the past or who did not have the same organizational structures in place that they did, and wondered how they managed (eg without phones or without parents). This showed that they were beginning to understand the concept of organization from other historical and cultural perspectives.

Independence: In the classroom, an independent attitude developed through this unit, and it was good to see the students making their own judgments on what their "best" work was and how they could include it in their portfolios.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

- Why aren't some people organized by themselves?
- Why do people have to organize all sorts of things?
- How do you not lose things?
- Why do we need to organize the books?
- How do police organize themselves?
- What are the organizations around us?
- Who types the information into the computer about all the books (in the central library)?

Students wanted to explore further how computers help us store and organize information. This came about as a result of one group discovering that the principal organized information into "files and folders". The students wanted to know how they could store their own information into such files and folders on a computer. Interesting discussions arose regarding the amount of space needed to file things in the past compared to now—the librarian in the central library made the students particularly aware of this by showing them the computerized library/lending system and database of the thousands of books in the library, which was previously written on cards and stored in filing cabinets.

Each day before and after school, a large number of students arrive and leave school on one of the many school buses to and from their homes. The students were concerned that in such a small space a mini bus might hit someone. As a result, the students devised a set of tips for all students (ie do not rush to the car park; give yourself plenty of time to arrive and leave; do not run to and from the bus to your classroom; ensure you are wearing your seatbelt; take a book or some playing cards for the journey; make sure you have any notes or reminders for your parents to take home in your bag before you leave for the bus). These were shared with all students, written in both the school's languages of instruction and posted in the entrance foyer of the school.

At some point during the unit, one student became aware of security systems in use in his home and in school (eg security cameras, burglar alarms, guard dogs, special codes for entering doors) and drew a flow chart showing how he moved within these systems from home to school (even locking the doors in the car). As this was obviously of importance to some of the students, and clearly demonstrated the interconnectedness of systems, we may consider including it as part of the inquiry next year.

At this point, teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

- Some parents commented that their child was using organization at home (ie cleaning their bedroom without being asked; one student labelled all the chairs for family members to sit on).
- The student responsibility and autonomy in helping to solve classroom organizational problems (and prevent them) was increasingly more evident at the conclusion of this unit of inquiry and beyond into the rest of the school year. (See box 7, "Learner profile and/or attitudes")
- As a result of the Primary Six students sharing their experiences in a local school classroom with students from this class, many students shared within their reflections such comments as: "Their classrooms are not that different from mine... I thought they would have their lessons in mud huts!" and "They have the same furniture we have in our class but it is not grouped like ours is."
- Students have also acted on suggestions for how to change the classroom system, and have rearranged a number of resources to make them more accessible.

9. Teacher notes

Expectations for students in language and maths

Learning language/learning about language emphasis

- Begin to talk about their thoughts and feelings.
- Begin to work in groups and discuss ideas.
- Write simple, sequenced recounts with beginning, middle and end.
- Begin to understand that signs and symbols carry meaning.
- Write and formulate questions.
- Begin to understand information presented in a range of visual forms including television, theatre and computer.

Learning maths/learning about maths emphasis

- Use ordinal numbers to describe the position of things in a sequence.
- Use a calendar to determine the date, and to identify and sequence days of the week and months of the year.
- Estimate, identify and compare lengths of time: second, minute, hour, day, week, month.
- Read and write the time to the hour, half hour and quarter hour.
- Collect, display and interpret data for the purpose of finding information.
- Begin to understand the purpose of graphing data.
- Create a pictograph and simple bar graph from a graph of real objects, and interpret data by comparing quantities: more, fewer, less than, greater than.

Most of the learning experiences took place in more than one language—if the learning experience or reflection (by either student or teacher) **only** took place in the host country language (the mother tongue of most students), it is written on the planner in *italics*.

1. What is our purpose?

To inquire into the following:

- **transdisciplinary theme**

How the world works: An inquiry into the natural world and its laws; the interaction between the natural world (physical and biological) and human societies; how humans use their understanding of scientific principles; the impact of scientific and technological advances on society and on the environment.

- **central idea**

Human survival is connected to understanding the continual changing nature of the Earth.

Summative assessment task(s)

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

Students write a reflection based on their understanding of the central idea (open-ended task).

Assessment tool: rubric

Students work collaboratively in groups of three to create detailed posters on natural events. Each member of the group has a responsibility to develop and deliver one of three aspects in an oral presentation: the causes of, the effects of, and the human response to the natural event (performance assessment).

Assessment tools: rubric, anecdotal records

What will we look for?

Evidence that shows students' understanding of why the Earth changes, what it looks like, and how humans respond to it.

Class/grade:

Age group: 7–9

School:

School code:


Title:

Teacher(s):

Date:

Proposed duration: number of hours

over number of weeks



PYP planner

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Key concepts: causation, change, connection

Related concept: erosion, geology, tectonic plates, movement

What lines of inquiry will define the scope of the inquiry into the central idea?

- How the different components of the Earth are interrelated
- How the Earth has changed and is continuing to change
- Why the Earth changes
- Human responses to the Earth's changes

What teacher questions/provocations will drive these inquiries?

What is the structure of the Earth?
How are the components connected?
What causes the Earth's structure to change?
What evidence is there that the Earth is changing?
What role do humans play in the Earth's changes?
How do humans adapt to these changes?
What role does technology play in looking at the changing nature of the Earth?

Provocations

- Exploration table
- Artifacts to stimulate thinking for discussion
- A planned earthquake drill followed by a discussion on the reasons for the drill, etc

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

- Observe students in a range of learning situations and record what they know or wonder about the changing Earth—exploration table.
- Students make a Mind Map® (drawings, words, phrases) relating to the central idea.
- Students view videos and/or a PowerPoint® presentation showing a variety of natural events (tsunami, earthquake, volcanoes, etc) and engage in a discussion, having the opportunity to pose questions.
- Teacher and students record on charts what the students know and/or wonder about the changing Earth: in particular conceptions and misconceptions.

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

- Students' understanding of the Earth's components is evidenced by creating and explaining a scientific drawing or model.
- Fact and opinion chart: in conjunction with *The Magic School Bus* videos, students record facts during the video presentation and then reflect, stating opinion, connections, wonderings and new understandings.
- Students collect rocks and soil samples, identify and classify the types of rock and soil through investigations (sand, clay, humus, loam).
- Students create a book based on student-generated questions and wonderings, and produce a class chart to add information for each natural event that includes the following headings: Natural events, Rapid change, Slow change, Facts, and Opinions.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

- Exploration table: children's books, samples of rocks and minerals, nails, safety glasses, vials, Petri dish, mock rock, toothpicks, coins, paperclips, 2.5 centimetre square tile
- Artifacts: water, mask, candle, shovel, rope, flashlight, canned goods
- Literature: *The Magic School Bus Inside the Earth* by Joanna Cole; *Earthquakes, Mountains* by Seymour Simon; *Planet Earth Inside Out* by Gail Gibbons; *The Big Rock* by Bruce Hiccock; *A Pebble in My Pocket* by Meredith Hooper; *Natural Disasters* (Dorling Kindersley Eyewitness Books); *Everybody Needs a Rock* by Byrd Baylor
- IT: Kidspiration®, Microsoft® PowerPoint® Internet websites: The Dirt on Soil, Soil Safari: <http://school.discovery.com>, Rock Hounds: <http://www.fi.edu>, Volcanoes Online: <http://library.thinkquest.org>, Earthquakes for Kids: <http://earthquake.usgs.gov/learning/kids.php>; digital cameras
- Art: paints, brushes, construction paper, bulletin board paper, modelling clay or plasticine, crayons, coloured pencils, markers, and assorted art materials
- Rock and mineral samples

How will the classroom environment, local environment and/or the community be used to facilitate the inquiry?

Builder, sculptor, field trip to collect rock samples

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

- Invite a guest speaker (a builder, the school nurse) to introduce and stimulate the inquiry about how humans adapt to the changing Earth. The visitor reads "The three little pigs" and talks about the types of materials that he uses when building and how appropriate they are to the environment. A discussion is held based on the question: If the wolf in the story is a natural disaster, what kind do you think he is and why?
- Students participate in a hands-on activity using an onion to develop an awareness of layering. Apply this understanding to a globe, asking students to predict and then find in resource books the layers that make up the Earth. Reconstruct the Earth's layers using plasticine, and label the parts.
- Students take a field trip to a museum to view related artifacts and displays. Use teacher questions as a focus for the visit.
- View *Magic School Bus Inside the Earth*—elicit from students key ideas from the video. Students organize facts around the headings: Facts, Opinions, Connections, Wonderings. New understandings.
- Use a world map to locate tectonic plates. Discuss cause and effect relationships. Conduct simulation of how plates move using alternate layers of plasticine and wooden blocks, experiment with pushing and folding.

Leading and facilitating student inquiry

- Outdoor rock inquiry: Students bring rocks from their environment. Predict what may happen when they break the rocks apart. Students choose the type of investigation to carry out such as: weighing, testing for erosion with other materials (water, salt, sandpaper), using different tools to break up, investigating the properties of a rock. How might this rock be used? Other investigations could include soil investigations. Students use learning logs to reflect on investigations. Students give oral feedback on their investigations. Class could identify property headings in order to classify rocks being investigated.
- Students research into the natural events and their causes and effects (earthquakes, volcanoes, flooding, landslides, erosion, weathering, glaciers). Make connections to the components of the Earth identified in earlier sessions.
- Consider the impact of the nature of natural disasters and how we would build in the areas where these events take place. Using what we know, students sketch simple diagrams of buildings in relation to the changing Earth. Label the types of materials and other considerations when building. The builder is invited back to give feedback to the students on their designs.

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Transdisciplinary skills

Thinking skills

- Acquisition of knowledge: vocabulary development and gaining facts

Research skills

- Observing: during the hands-on activities students will use all the senses to collect information

Communication skills

- Writing: note taking during visits and presentations, recording information in learning logs, and notes when researching
- Presenting: oral presentations, putting together informational posters on the causes of the Earth's changes

Learner profile

Inquirers: asking questions and researching information.

Thinkers: thinking creatively and critically about the causes and effects of the continual changes of the Earth and how humans adapt and interact with these changes.

Communicators: being able to explain the changes in the Earth's structure and the human response to these changes.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

The central idea worked. It pushed the students' thinking beyond their prior knowledge. We found that the students had previous knowledge of the Earth's layers or components so we did not spend a great deal of time on this.

Throughout the unit, students completed research on environmental events. They also explored the Internet to discover organizations that provide emergency assistance. These experiences provided a wealth of information and led to significant development in the students' understanding of the central idea. Students were able to synthesize this knowledge when working in their collaborative groups. They designed and presented a poster describing a natural event. Each student contributed to the oral presentation based on agreements made within the groups. The written and oral presentations described the human action taken.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

The summative assessment is a means to evaluate student understanding of the central idea and we believe this assessment demonstrated this understanding.

Looking back on the assessment, the students did not show what happens throughout the event. Rather, they showed the event and how it changed the Earth from their perspective. Maybe next time the criteria could include a chronology element. Certainly many events that have changed the Earth have happened over a longer period of time.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

The links the students made in their inquiries between the events and human responses to the events clearly showed a connection to the transdisciplinary theme. Having the builder come in as an expert really helped the students to make technology connections and students showed an interest in implications for building in areas prone to environmental change.

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Key concepts

We noticed that during this unit our focus on "activities" diminished, and concept-based inquiries increased, allowing our students to be more focused during the inquiry.

Causation and change: Students' conceptual understanding of causation and change were clearly represented in the examples and explanations of natural disasters and the impact on human response. Students realized there is a conflict between nature and humans and how the world works. The creation of the tectonic world map and the realization of why the Earth changes exemplified the concepts.

The teacher and student questions facilitated the learning and the students were engaged and motivated with each learning experience as described in box 6 and below.

Transdisciplinary skills

Thinking skills

Students moved from **comprehension** to **analysis** and **evaluation** during the inquiry point, "Human responses to the Earth's changes". Questions were posed relating to the occurrence of a natural event: "How would you respond?" "What would you do?" The responses were typical of 8 and 9 year olds (to evacuate, to move, to clean up). Through probing and enthusiastic discussions, students began to pose their own questions, eg "Why do people live near fault lines or by the coast?" This in turn led to many discussions about choices, actions and how to stay safe if people live in areas that are subject to natural disasters.

Communication skills

Writing and presenting information were central to this unit of inquiry. Examples of how students organized their thinking through their writing included learning logs, lab sheets, reflections, journals, poetry writing and essay writing. Guest speakers (school nurse and a home builder) spoke to the students about having an emergency plan, first aid, evacuation drills, and building safe homes depending on the area in which you live. The information presented was technical at times, yet students realized its importance, listening carefully and asking questions. They shared their understandings with their families.

Research skills

Research was central to this unit. Students "dug" deep into the inquiry point, "Why the Earth has changed and continues to change". Their prior knowledge of rapid changes, such as volcanoes and earthquakes, helped ignite this part of the inquiry. Questions flowed, which led to new understandings of why the Earth changes. As a whole group, we read about tectonic plates and placed yarn around a student-made world map to resemble the major tectonic plates. To further the students' understanding, expert groups were formed to research slow and rapid changes (erosion, weathering, glaciers, landslides, volcanoes, earthquakes and flooding).

Learner profile and attitudes

Inquirers: The inquiry into why the Earth changes encouraged the students to develop their research skills and become decision makers for their own learning. The guest speaker (home builder) created more "curious minds" about the world in which they live. The student-initiated investigation into why humans build homes to adapt to and interact with the environment strengthened their global perspectives and understanding.

Thinkers: Students pushed their thinking in understanding the complexities of the Earth and its interconnectedness. They engaged in learning experiences that provoked them to think critically about the human factor and the positive and negative influences we have on our planet, eg building safer homes, organizations that provide relief to victims of natural events, cutting trees down.

Communicators: Students shared knowledge, wonderings and insights through discussions, a variety of writing projects, sketches, illustrations and posters. Throughout this unit of inquiry, many visitors (parents and teachers) came to the classroom to observe and were overwhelmed with the level of confidence and articulation of the students as they shared what they were learning. Students used the PYP language to describe themselves as risk-taking, knowledgeable and committed learners.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

At this point, teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

Student-initiated inquiry

- Students brought rock samples from their own rock collection and wanted to know what kind of rocks they were. This led to an inquiry into identifying types of rocks or minerals.
- Students were curious about the different colours of soil, which led to further inquiry into the types of soil.
- Students initially reacted to natural events with concern since they live in a hurricane zone. Their worry compounded upon learning about the tectonic plates as they realized their city is located on a fault line. This resulted in a student-initiated inquiry into ways we can be safe and protect ourselves.
- Following the presentation by the local builder, students inquired into how homes are constructed in other parts of the world. Collaborative groups chose from a range of different global regions and investigated how and why humans build homes to adapt to and interact with their environment. Teachers modelled the process with a case study, including concepts such as geographic location, climate, landscape, settlement and resources.

Student questions

What is the Earth made of?
 How deep is the Earth?
 What is a rock?
 Why does a rock sparkle?
 What is inside a rock?
 Where do rocks come from?
 How do rocks change?
 Why are soils different colours?
 How are mountains formed?
 How does the Earth change?
 What do we do to be safe?
 How are homes built in other parts of the world?

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

- Students watched the Weather Channel on television and reported back to the classroom on recent flooding, earthquakes locally and around the world.
- Parent's comment on his or her child's interest on how their home was constructed.
- "Recess Rock Club" formed.
- Students started their own rock collection; they used reference books in the classroom to identify rocks and minerals.

9. Teacher notes

We worked closely with the media specialist to build our resources of non-fiction books related to this unit of inquiry.

There was an opportunity to make authentic connections to the arts, eg how rocks and minerals are used in the creation of monuments, memorials and sculptures around the world (the Great Wall of China, Mount Rushmore, Easter Island, Stonehenge and the Pyramids) and to the architect, Frank Lloyd Wright. Additionally, we played and moved to pieces of classical music and discussed the ways in which these pieces could reflect the changing Earth.

As a result of a gallery walk viewing collaborative posters, students made conclusions about the connections between events, eg glaciers cause floods; floods cause erosion; glaciers can cause erosion; hurricanes cause floods; landslides cause erosion; earthquakes can make mountains, etc.

1. What is our purpose?

To inquire into the following:

- transdisciplinary theme

Sharing the planet: An inquiry into rights and responsibilities in the struggle to share finite resources with other people and with other living things; communities and the relationships within and between them; access to equal opportunities; peace and conflict resolution.

- central idea

Finding peaceful solutions to conflict leads to a better quality of human life.

Summative assessment task(s)

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

In pairs, students research and identify a case study of a global conflict and how it was resolved. Students analyse and evaluate the effectiveness of how the conflict was resolved and speculate on the sustainability of the resolution in the future. Research findings should be expressed in an oral presentation and supported by written notes. As a result of this summative assessment, students will begin to have a greater understanding of the different perspectives of other cultures and which of the PYP attitudes they may have to continue to demonstrate in order to resolve such conflicts.

Assessment tool: Anecdotal records to be made on the oral presentations of the students with a specific focus on students' understanding of intercultural conflict, conflict resolution and the attitudes people need to demonstrate in order to resolve such conflicts. Students will self-reflect in their writing journals on how sustainable the solution would be in the example they chose to analyse and present.

Ongoing: Each student will have the opportunity to take on the role of a class conflict resolution manager for a specified amount of time. His or her role is to assist in the managing and the solving of various peer conflicts that may arise within the students' learning community. It is anticipated that students will apply conflict resolution skills learned and understood in their ongoing lives.

Assessment tool: A performance rubric (designed collaboratively by teachers and students) reflecting the extent of the conflict manager's level of understanding of the central idea, transdisciplinary skills and learner profile attributes.

Class/grade:

Age group: 9–12

School:

School code:


Title:

Teacher(s):

Date:

Proposed duration: number of hours

over number of weeks



PYP planner

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Key concepts: causation, perspective, responsibility

Related concepts: conflict, diversity, justice

What lines of inquiry will define the scope of the inquiry into the central idea?

- Causes of conflict
- Conflict resolution and management
- Living and working together peacefully

What teacher questions/provocations will drive these inquiries?

How can communities be made a more just place for all members?
 In what ways is peace an active rather than a passive state?
 Can differences be resolved without conflict?
 What are the reasons for conflict taking place in the community?
 What are some of the struggles that communities currently face?

Provocations

- Over a certain period of time, students are allocated a limited number of finite resources in the classroom (paper, pencils, chairs, tables, sports equipment) and must decide how to share the resources during the allocated time.
- Provide students with examples of artifacts (eg incense, a religious text, a musical instrument), resources (eg rice, bottle of water), artwork and/or music from different cultures and ask them how each made them feel and why this was.

3. How might we know what we have learned?

This column should be used in conjunction with "How best might we learn?"

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

- Read aloud stories involving conflicts within a community (see resources in box 5); students analyse both sides of the conflict within the story, how the characters react, how the conflicts are resolved (if indeed they are) and suggest other possible solutions.
- Students engage in self-assessment of previous research they have undertaken. They look at portfolios, personal journals, etc in order to assess research skills against a teacher- or student-designed rubric, taking into account data collection, recording, organization and interpretation. Students set their own goals for improvement during this unit.

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

- Locate examples of conflict within the global community through researching media outlets that communicate such news and information. Students will need to access information, locate the conflict, explain the cause of the conflict, and look at the conflict from more than one perspective (process-focused assessment).
- Students self-assess their own oral presentations and performances as conflict resolution managers using a rubric with performance-based criteria. This will include the students' proper use of the "I-message" framework in role-play situations and to solve real-life conflicts at school.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

Online materials include: <http://www.teachingtolerance.org>; <http://www.unitedstreaming.com>; UN Cyberschoolbus website: <http://www.un.org/cyberschoolbus>; online newspaper archives; Wikipedia: www.wikipedia.org.

- Related literature: *The Lorax* or *The Butter Battle Book* by Dr Seuss, *Shilo* by P Naylor-Reynolds, *Bridge To Terabithia* by Katherine Paterson
- Artwork examples: Escher, Munch, Picasso
- Music examples: Sakamoto, Mozart
- Conflict resolution games: board games (eg Conflict Buster, Impact Publications; Earth Cooperative Game, Abundant Earth Inc) and computer games (eg <http://www.worldvision.org.nz/education/games.asp>)

How will the classroom environment, local environment and/or the community be used to facilitate the inquiry?

The classroom environment and the playground will be the centre of analysis for conflicts among the students. Specifically, the reflection or meeting centre where the conflict resolution manager reflects on and records and communicates any conflict or conflict resolution incidents that occur in the school day.

There will be access to conflict resolution games (see above) in the classroom during free time.

People within the local environment, who can present conflict resolution from their perspective, eg the principal, PE teacher, cleaning or auxiliary staff, school counsellor, police officer.

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the key questions?

- In groups, students create Mind Maps® of what they know about possible areas of conflict in their lives and within their community, and consider peaceful solutions to these areas of conflict. The teacher creates a classification chart under which students place **submissive**, **aggressive** and **assertive** resolutions to each conflict scenario.
- The teacher and students deconstruct the "I-message" framework to gain relevance and meaning for all parties involved in a conflict, eg "I feel angry when you make fun of me. I want you to think about how I feel and not make fun of me."
- The teacher establishes conflict scenarios (interpersonal and intercultural), where the students role-play their interpretations of how the conflicts could be resolved. Students apply the "I-message" framework to reach a peaceful resolution.
- Interviews with different members of the school or local community who can give perspectives on conflict resolution (see box 5): students discuss and write questions for different individuals.
- The teacher models a Y-chart to explore and explain one reason for **global** conflict (eg wants or needs, unequal distribution of power or resources, beliefs and values, miscommunication). "What does it look like?" "What does it sound like?" (what would people be saying?), "What does it feel like?" Students make similar charts for other areas of conflict.
- Students research conflicts locally and in the global community by watching the news, reading newspapers, etc, and report back to class. Groups analyse the causes of those conflicts and form conclusions about the main causes of these conflicts. In pairs, students prepare oral presentations (see box 1, "Summative assessment tasks").
- Students reflect individually on the central idea in the light of understandings gained during the unit and write evidence of finding that peaceful solutions to conflicts can lead to a better quality of human life.

What opportunities will occur for transdisciplinary skills development and for the development of the attributes of the learner profile?

Transdisciplinary skills

Resolving conflict: Through role-play scenarios and within their role as conflict resolution managers, students will demonstrate listening attentively, reacting reasonably, compromising, and accepting responsibility in times of conflict resolution.

Dialectical thought: Exploration of intercultural case studies of conflicts and conflict resolution and character analysis in stories means that students can better understand diversity within others through examples recorded in their journals, research and discussions.

Research skills: As part of prior learning, students have identified research skills to develop during the inquiry. They will use these skills to collect, record, organize and interpret their findings about global conflicts, and then present these findings in their oral presentations.

Learner profile

Principled: Through reflecting upon how conflicts are solved, both within the immediate community and within the global community, students develop a broader understanding of integrity, honesty and a sense of fairness of justice.

Open-minded: Through exploring various conflicts around them and the case studies presented to them, students will better respect the views, values and backgrounds of others and consider a range of perspectives.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

The main objective that we were hoping to achieve was to develop practical application of the inquiries. Conflicts are everywhere in our lives and it is critical that students be able to identify and resolve them as they arise. We developed a practical and hands-on approach to the learning experiences and assessment. We did this through provocations that explored the types of responses to artifacts, art and music and through providing examples of global conflicts that had been resolved peacefully.

We focused the central idea on a personal level for the students (through reflecting on the contributions of the class conflicts resolution manager), while taking into consideration the community and global repercussions of individual actions and behaviours (through the analysis of global conflicts that have been solved). In the final outcome, the students developed a practical and fundamental understanding of conflict and conflict resolution.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

Due to the practical nature of the conflict resolution manager, the students demonstrated a clear understanding of differing perspectives of justice and diversity from an immediate community level. The analysis of a global conflict and how it was solved needs to be broadened (and perhaps even categorized) to include possible areas of focus, eg sharing of resources—oil, water, land or belief systems—and the impact on a society. This would give the students a clearer idea of what kind of conflicts they could explore.

A greater emphasis could have been made on intercultural understanding, although students did demonstrate this during the course of the unit. Students raised issues about beliefs and use of different languages, but this was not followed up to a great extent.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

Through both of the summative assessment pieces, students explored, at a local level and at a global level, the relationships within and between communities as well as how any potential conflicts (struggles) may have been or could be resolved. This was particularly evident when the conflict resolution manager identified the problems he or she witnessed in the playground or classroom and how the conflicts could have been solved or were solved.

In the self-reflections on the sustainability of the conflict resolutions that students analysed from around the world, the students could clearly identify what would need to be done in order to achieve a longer lasting peaceful settlement to the issue. They used the PYP attitudes to explain this (eg "The governments of two countries would need to display empathy for each other in order to understand why this resource is important to both cultures.")

Towards the end of the unit, one student commented that, "I always thought peace meant just being quiet, but now I see that it can mean speaking out about something."

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

Key concepts

Causation: The analysis of case studies from a global perspective provided a framework for the students to explore these situations: students needed not just to identify the problem but also the possible causes (causation) of it.

Perspective and responsibility: The "I-message" engagement was especially effective in deepening students' understandings of perspective and responsibility. The role-play situations that the students were a part of enabled the students to see the points of view of their peers and provoked them to think about their responsibility towards the consequences of their actions in relation to these points of view.

Transdisciplinary skills

Social skills

Respecting others: The provocations noted in box 2 emphasized the students' needs for respecting others and for listening to the viewpoints of others as they shared their responses to artifacts, art and music. Students were asked to reflect in their writing journals not only on their responses to each provocation but also on how the different responses of others affected them.

Thinking skills

Analysis: After exploring the character analysis in the literature, students created a character profile of how each character's personality connected to the PYP attitudes and then how each character showed (or did not show) compassion for other characters.

Learner profile attributes and PYP attitudes

Open-minded: The conflict resolution manager allowed the students to better understand their peers and the ways in which they tended to approach and solve problems. Thus students were beginning to become more open-minded towards their peers.

In the analysis of global or intercultural conflicts, the students used the PYP attitudes as a tool for reflecting on the resolution process. In addition, through the character analysis within stories explored, students used the attitudes to justify their judgments of the actions of the characters in the stories.

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

What makes a “good sport”?

What makes a person good or bad?

Out in the playground, how can I show or look for examples of the PYP attitudes?

Why should what we believe make someone dislike us?

Can there be more than one “right answer” to a problem?

Are there some attitudes that, when they are not there, are more likely to cause conflicts than others?

Sometimes it seems we have a problem because we don’t speak the same language—is that a conflict?

Students wanted to find out more about what made a good team member on a sports team. They clearly knew that it was more than just “being skilful”; it also meant working as part of a team, but they wanted to explore how this looked in terms of a coach’s expectations.

At this point teachers should go back to box 2 “What do we want to learn?” and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

- A student was having a discussion with his classmate that turned into a debate. He was able to recognize and communicate the reason for their “conflict” (difference in values).
- A student was arguing with her sister at home. She recognized they were having a conflict and initiated a discussion that would lead to a cooperative resolution. The student decided to share this at an open discussion of the conflict manager reflections.
- There is everyday application of resolution skills in the classroom and playground by students—the students are being more autonomous in solving conflicts without appealing to teachers who are on lunch duty.
- The physical education (PE) teacher reported a significant increase in the students independently solving team-related conflicts during sports events. It was clear that the students were being more open-minded towards their peers and were accepting of each other’s responses while always being mindful of the common goal that everyone shared.
- The class receives delivery of a newspaper each day. Initially, there was a common interest in the more “graphic stories and articles”. As a result of this unit, when reflecting on the content of the daily newspaper through whole-class discussions, students were more sensitive to the actual conflict and the ways in which the PYP attitudes could be applied in order for the conflict to be solved in the future.

9. Teacher notes

Learning language/Learning about language emphasis

- Students interact confidently in a variety of situations.
- Students adapt speaking and listening strategies to the context, purpose and audience.
- Students reflect upon their own approach to communication to monitor and assess their learning.
- Students appreciate authors’ use of language and begin to recognize the meaning beyond the literal level.
- Students respond to viewing experiences orally and in writing, using specific vocabulary and terminology.
- Students continue to make informed choices in their personal viewing experiences.

Connections to previous unit in school’s programme of inquiry

Central idea of previous unit: People express their beliefs in different ways.

An inquiry into:

- different places that reflect people’s beliefs
- expressions of different beliefs (traditions)
- signs and symbols that reflect beliefs.

Students were asked to reflect on what they had learned from the above unit at the start of the current unit, and it was useful to see the development of their understanding of cultural diversity relating to beliefs.